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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,960	08/08/2001	Felix A. Levinzon	1575.2003-001	2004
7590	10/27/2004		EXAMINER	
Robert T. Conway, Esq. HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive Lexington, MA 02421-4799			CHAPMAN JR, JOHN E	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 10/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/924,960	LEVINZON, FELIX A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	John E Chapman	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5,8-12,14-27,30,31,33-42,45-49,51-57 and 63-66 is/are pending in the application.
- 4a) Of the above claim(s) 14-19,33,34 and 51-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,8,10,11,20-27,31,35-42,45,47,48,56,57 and 63-66 is/are rejected.
- 7) ☒ Claim(s) 9,12,30,46 and 49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 August 2004 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-4, 8, 10, 11, 20-26, 31, 35-41, 45, 47, 48, 56, 57, 63 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms et al. in view of Flechsig et al.

Flechsig et al. discloses a system for converting sensed force into electrical signals comprising a piezoelectric transducer 610, a high-pass filter 632 and a low-pass filter 642. The amplifier 630 inherently isolates the inputs of the two filters and so comprises a "buffer." Hence, the only difference between the claimed invention and the prior art consists in providing a passive circuit between piezoelectric transducer 610 and a low-pass filter 642. While Flechsig et al. provides a preamplifier 620, the omission of an element along with its function where not needed, is generally recognized as obvious within the art. *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975); *In re Karlson*, 311 F.2d 581, 136 USPQ 184 (CCPA 1963). Accordingly, it would have been obvious to omit the preamplifier 620 where not needed. Likewise it would have been obvious to eliminate amplifier 640, since it would have been obvious that amplifier

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730 can by itself perform the function of increasing the sensitivity to smaller diameter and lower height defects. Consequently, it would have been obvious to provide a passive circuit between piezoelectric transducer 610 and low-pass filter 642.

Regarding claims 3, 63 and 64, the flexural bending as indicated by 537, 538 in Fig. 5(b) is a natural resonance.

Regarding claims 4, 26 and 41, it would have been obvious to incorporate the function of the amplifiers 630 and 640 into the filters 632 and 642 in order to provide an integral unit.

Regarding claims 10 and 47, amplifier 630 comprises a source follower.

4. Claims 5, 27 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms et al. as applied to claims 1, 23 and 38 above, and further in view of Dunnegan.

The only further difference between the claimed invention and the prior art consists in offsetting the electrical signal. Dunnegan teaches that it is known in the art to provide a DC offset (col. 11, lines 40-43). Accordingly, merely to it provide a DC offset would have been obvious to one having ordinary skill in the art.

5. Claims 63 and 64 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Harms et al.

Harms et al. disclose a system for converting sensed force into electrical signals in Fig. 4 comprising a piezoelectric transducer 1, a high-pass filter 9 that passes a resonance frequency of the transducer and a low-pass filter 10 that passes a mechanical influence. The filters are connected to the transducer directly through a passive circuit  $C_0$ . The only difference, if any,

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consists in whether low-pass filter 10 passes frequencies in a linear region of the transducer. The piezoelectric transducer 1 appears to inherently possess a linear region that are passed by the low-pass filter 10, and if not, it would have been obvious to pass frequencies in a linear region of the transducer in order to detect mechanical influences at such frequencies.

6. Claims 65 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms et al. in view of Dunnegan.

The only difference between the claimed invention and the prior art consists in using filters that amplifying the signal. Low pass and high pass filters conventionally comprise an amplifier, as illustrated in Fig. 4 of Dunnegan, and it would have been obvious to use a conventional filter in order to amplify the signal. Regarding offsetting the electrical signal, the filters 9 and 10 of Harms et al. provide an offset signal by virtue of the DC offset (col. 11, lines 40-43).


7. Claim 9, 12, 30, 46 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Applicant's arguments filed 19 August 204 have been considered but are moot in view of the new ground(s) of rejection.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John E Chapman  
Primary Examiner  
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